

Lab 1

Deadline: March 12th at 3:00 p.m.

- A. Create a repository lab1 through GitLab webpage. In your Unix platform, configure your git environment by using git config, and then execute the following commands:

```
$ script lab1.script
```

```
$ whoami; pwd
```

```
$ git config -l
```

```
$ git clone https://pd2a.imslab.org/gitlab/<your gitlab account>/lab1.git
```

Then press Ctrl-D. At this time, a file “lab1.script” is created. You can use the cat command to show the contents of the file:

```
$ cat lab1.script
```

Move the file into lab1 directory:

```
$ mv lab1.script lab1
```

Add lab1.script into your repository (by using git add). Commit (by using git commit) and push to GitLab (by using git remote add and then git push).

- B. Consider the following algorithm:

1. input n
2. print n
3. if $n = 1$ then STOP
4. if n is odd then $n \leftarrow 3n + 1$
5. else $n \leftarrow n/2$
6. GOTO 2

Given the input 22, the following sequence of numbers will be printed:

22 11 34 17 52 26 13 40 20 10 5 16 8 4 2 1

Write a C++ program to read in an integer and print out the corresponding sequence of numbers. You do not need to worry about the overflow problem.

Hand-in Rules

Your GitLab account shall have a repository lab1, which includes the following things:

1. The file *lab1.script* you obtained in question A.
2. A *.cpp* and a *.h* (if any) file(s) for question B.
3. A *README.md* file showing how to compile your program for question B.
4. A running script file showing how to run your program for question B. (Use the script command to create it.)